

Amendments to the Claims: This listing of claims will replace all prior versions, and listings, of claims in the application

Listing of Claims:

1. (Currently Amended) A process of treating internal combustion engine exhaust gas containing O₂, NO_x, unburnt hydrocarbon ("HC"), CO and soot, comprising the steps of:
 - i. ~~catalytically oxidizing~~ contacting the engine exhaust gas with a first catalyst adapted to be fed with the engine exhaust gas and effective to promote oxidation of HC, to oxidize a substantial part of the HC;
 - ii. ~~catalytically treating the product step i~~ contacting the engine exhaust gas that has passed over the first catalyst with a second catalyst effective to promote the catalytic oxidation of NO to NO₂, to oxidize NO to NO₂.
 - iii. collecting soot on a filter adapted to be fed with the engine exhaust gas that has passed over the first and second catalysts; and
 - iv. combusting the collected soot by reaction with the catalytically oxidized NO₂ and possibly any the O₂ left over after steps i and ii.
2. (Cancelled)
3. (Cancelled)
4. (Currently Amended) Process according to claim ~~3~~ in which 1, wherein the first and second catalysts are honeycomb-supported.
5. (Currently Amended) Process according to claim ~~4~~ in which, wherein the cell density of the honeycomb is in the range 100-900 per square inch.

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6. (Currently Amended) Process according to claim 1 ~~in which, further comprising step of cooling the engine exhaust gas leaving step/catalyst i undergoes cooling and then enters step/catalyst ii~~ the first catalyst and before the engine exhaust gas contacts the second catalyst.

7. (Currently Amended) Process according to claim 6 ~~in which the first oxidation, wherein the step of oxidizing a substantial part of the HC is carried out close to the source of the engine exhaust gas, whereby to obtain a maximum convenient operating temperature and reaction rate is obtained.~~

8. (Cancelled)

9. (Currently Amended) Process according to claim 6, further comprising the step of providing an increased amount of a combustible upstream of a first catalyst for effecting step i for increasing the first catalyst to increase the temperature at which step i operates.

10. (Currently Amended) Process according to claim 9 ~~in which said, wherein the combustible is provided by modifying engine settings to pass more HC and/or generate more CO.~~

11. (Currently Amended) Process according to claim 6 ~~in which a, wherein the first catalyst for effecting step i has a very low light-off temperature for HC and CO oxidation.~~

12. (Previously Presented) Process according to claim 1, wherein the HC is absorbed on the soot.

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13. (Currently Amended) Process according to claim 1, further comprising the step of removing NOx downstream of soot combustion the step of combusting the collected soot.

14. (Currently Amended) Process according to claim 13, wherein the step of removing NOx uses is through a regenerable NOx absorber downstream of the collecting trap.

15. (Currently Amended) Process according to claim 14 ~~including catalytic NOx removal,~~ further comprising the step of catalytically removing NOx downstream of from the NOx absorber.

16. (Currently Amended) ~~System~~ A system for treating internal combustion engine exhaust gas containing O₂ NOx, unburnt hydrocarbon ("HC"), CO and soot, comprising:

- i. a first catalyst adapted to receive the engine exhaust gas and effective to promote oxidation of HC therein for oxidizing a substantial part of the HC;
- ii. a second catalyst ~~receiving the product of~~ adapted to receive the engine exhaust gases that have passed over the first catalyst and disposed downstream of the first catalyst, the second catalyst effective to promote oxidation of NO to NO₂; and
- iii. a filter adapted to receive the engine exhaust gases that have passed over the first and second catalysts, the filter effective to collect soot and to retain it until combusted soot for combustion by reaction with said the NO₂ and, depending on conditions, any the O₂ left over after the first catalyst.

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17. (Currently Amended) ~~System~~ The system according to claim 16 ~~in which,~~
wherein the first and second catalysts are honeycomb-supported.

18. (Currently Amended) ~~System~~ The system according to claim 17 ~~in which,~~
wherein the cell density of the honeycomb is in the range 100-900 per square inch.

19. (Currently Amended) ~~A~~ The system according to claim 16, wherein the
internal combustion engine is a diesel engine ~~in combination with a system according to~~
~~claim 16 connected to its exhaust.~~

20. (Currently Amended) ~~An engine~~ The system according to claim 19 ~~which~~
~~is one,~~ wherein the diesel engine is designed for light duty applications.

21. (Currently Amended) ~~An engine~~ The system according to claim 20 ~~which,~~
wherein the diesel engine is of the a turbo-charged direct injection type.

22. (Currently Amended) ~~An engine combination~~ The system according to
claim 19, ~~which is~~ wherein the diesel engine is a heavy duty engine.

23. (Currently Amended) ~~An engine combination~~ The system according to
claim ~~22~~ 16, wherein the first catalyst is positioned close to the second catalyst.

24. (Currently Amended) ~~An engine combination~~ The system according to
claim ~~23~~ 16, wherein the first catalyst and the second catalyst are at opposite ends of a
single catalyst monolith.

25. (Currently Amended) Process according to claim 1, ~~wherein step i~~ the
step of oxidizing a substantial part of the HC over a first catalyst further comprises
oxidizing some NO to NO₂.

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26. (Previously Presented) A process according to claim 1, wherein the first catalyst comprises at least one supported platinum group metal (PGM).

27. (Previously Presented) A process according to claim 26, wherein the at least one supported PGM is selected from the group consisting of platinum, palladium and rhodium.

28. (Previously Presented) A process according to claim 27, wherein the at least one PGM is platinum and palladium.

29. (Previously Presented) A process according to claim 27, wherein the support is selected from the group consisting of alumina, ceria and alumina and ceria.

30. (Previously Presented) A process according to claim 28, wherein the support is selected from the group consisting of alumina, ceria and alumina and ceria.

31. (Currently Amended) A process according to claim ~~27~~ comprising 1, wherein the first catalyst comprises a first layer comprising platinum-catalyzed alumina and a second layer comprising ceria overlying the first layer.

32. (Currently Amended) A process according to claim ~~27~~ comprising 26, the at least one supported PGM comprises from 10-150g/ft³ platinum.

33. (Previously Presented) A process according to claim 1, wherein the second catalyst comprises at least one supported platinum group metal (PGM).

34. (Previously Presented) A process according to claim 33, wherein the at least one supported PGM is selected from the group consisting of platinum, palladium and rhodium.

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35. (Previously Presented) A process according to claim 34, wherein the at least one PGM is platinum.

36. (Previously Presented) A process according to claim 35, wherein the support is alumina.

37. (Currently Amended) A process according to claim 35, ~~comprising~~ wherein the at least one PGM comprises from 10-150g/ft³ platinum.

38. (Currently Amended) ~~A~~The system according to claim 16, wherein the first catalyst comprises at least one supported platinum group metal (PGM).

39. (Currently Amended) ~~A~~The system according to claim 38, wherein the at least one supported PGM is selected from the group consisting of platinum, palladium and rhodium.

40. (Currently Amended) ~~A~~The system according to claim 39, wherein the at least one PGM is platinum and palladium.

41. (Currently Amended) ~~A~~The system according to claim 39, wherein the support is selected from the group consisting of alumina, ceria and alumina and ceria.

42. (Currently Amended) ~~A~~The system according to claim 40, wherein the support is selected from the group consisting of alumina, ceria and alumina and ceria.

43. (Currently Amended) ~~A~~The system according to claim 39 comprising a first layer comprising platinum-catalyzed alumina and a second layer comprising ceria overlying the first layer.

44. (Currently Amended) ~~A~~The system according to claim 39, comprising from 10-150g/ft³ platinum.

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45. (Currently Amended) ~~A~~The system according to claim 16, wherein the second catalyst comprises at least one supported platinum group metal (PGM).

46. (Currently Amended) ~~A~~The system according to claim 45, wherein the at least one supported PGM is selected from the group consisting of platinum, palladium and rhodium.

47. (Currently Amended) ~~A~~The system according to claim 46, wherein the at least one PGM is platinum.

48. (Currently Amended) ~~A~~The system according to claim 47, wherein the support is alumina.

49. (Currently Amended) ~~A~~The system according to claim 47, comprising from 10-150g/ft³ platinum.

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